

**REMARKS**

Reconsideration and continued examination of this application are respectfully requested.

The amendment to the claims recites embodiments which the Examiner has indicated as allowed or allowable. The independent claims now recite a purity level of 99.99% tantalum or higher. Support for this amendment can be found in the claims as originally filed as well as in the specification including the Examples. This amendment places the application in immediate condition for allowance based on the Examiner's previous indication of the allowed claims in this final Office Action. Accordingly, since the applicants are simply incorporating the language of dependent claims into independent claims, no new questions of patentability should arise nor does this amendment necessitate any further searching on the part of the Examiner since this claim language has been present in some of the claims as originally filed. Furthermore, since this amendment places the application in immediate condition for allowance, the Examiner should enter the amendment.

At page 2 of the Office Action, the Examiner objects to claim 123 in view of claim 125 as substantial duplicates of each other. Based on the amendment to claim 123 and to claim 125, these claims are not substantial duplicates since one claim is now dependent on claim 122 and the other claim is now dependent on claim 124. Accordingly, this objection should be withdrawn. With respect to the objection to claim 114, the applicants appreciate the Examiner's careful review. Claim 114 has now been amended to recite that the log ratio is from about -1.5 to about 7.0. Accordingly, this objection should be withdrawn as well.

At the bottom of page 2 of the Final Office Action, the Examiner rejects claims 171-188 under 35 U.S.C. §112, second paragraph for indefinite reasons. The Examiner asserts that these

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claims are indefinite due to the use of the term "type" in claim 171. The Examiner indicates that the word "type" is not necessary. For the following reasons, this rejection is respectfully traversed.

While claims 171-188 are clear to one skilled in the art and the term "type" would be understood. To expedite the prosecution of this application, the term "type" has been removed from claim 171. The applicants note that the removal of this term does not alter in any way the scope of these claims and therefore the use of the term is considered redundant. Accordingly, the rejection should be withdrawn.

At page 3 of the Office Action, the Examiner rejects claims 28-30, 34, 37, 39, 120-121, 123, 125-129, 133-136, 138-140, 144-148, 150-153, 157-160, 164-175, 179, and 183 under 35 U.S.C. §103(a) as being unpatentable over Clark et al. "Influence of Initial Ingot Breakdown on the Microstructural and Textural Development of High-Purity Tantalum," (hereinafter "Clark et al.") in view of Japanese Patent Publication No. 06-264232 (hereinafter "JP'232"). The Examiner essentially argues that Clark et al. shows a fine-grained, recrystallized tantalum metal showing various textures and that JP'232 shows a certain purity level of tantalum for thin film applications. The Examiner believes it would be obvious to combine these references to render the above-mentioned claims obvious. For the following reasons, this rejection is respectfully traversed.

As indicated above, each of the rejected claims now incorporate a claim that was indicated as allowable but for its dependency on a rejected claim. Accordingly, for this reason alone, each of these claims are now allowable. Accordingly, this rejection should be withdrawn.

At page 5 of the Office Action, the Examiner rejects claims 184-188 under 35 U.S.C. §103(a) as being unpatentable over Clark et al. in view of JP'232 and further in view of Emigh et al. (U.S. Patent No. 5,687,600). The Examiner relies on Clark et al. and JP'232 for the same

reasons as set forth above in the earlier §103(a) rejection. The Examiner further asserts that Emigh et al. shows tantalum sputtering target assemblies which include a backing plate. Accordingly, the Examiner asserts it would be obvious to use a backing plate in combination with the tantalum sputter targets of the claims. For the following reasons, this rejection is respectfully traversed.

As indicated above, claims 184-188 are now dependent on claims which contain allowable subject matter based on the comments set forth in the final Office Action. Accordingly, for this reason alone, this rejection should be withdrawn.

The applicants further note that with respect to the subject matter as set forth in the rejected claims, this subject matter shall be pursued in one or more continuation applications and arguments will be provided to distinguish the claimed subject matter from the cited references relied upon by the Examiner.

The applicants and the undersigned do appreciate the Examiner's indication of the allowable subject matter. The applicants do note that claim 66 was not mentioned but should have been indicated as allowed since it is dependent on claim 1. Furthermore, claim 124 should have been indicated as being objected to since it is more narrow than claim 122 which was indicated as being objected to. However, as mentioned above, in view of the amendments to the claims, each of the claims now recite subject matter which the Examiner has indicated as allowable.

Finally, new claims 189, 190, 191 and 192 simply recite subject matter which would also be allowable in view of the comments set forth in the Final Office Action by the Examiner. These three claims recite a tantalum sputter component which recites a purity level of at least 99.99% tantalum and a grain size of about 75 microns or less in a uniform texture of mixed (111) throughout the thickness of the sputter component. Accordingly, these claims are similar to the

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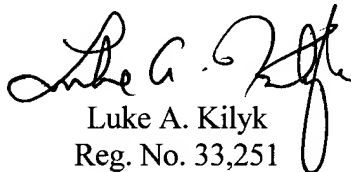
claims indicated as allowed or allowable. (For instance, see claims 176-178) Thus, no questions of new matter should arise with respect to these new claims and since an equal number of claims have been canceled, this amendment should be entered. Should the Examiner have any questions with respect to these claims or any of the above comments, the Examiner is encouraged to contact the undersigned by telephone.

**CONCLUSION**

In view of the foregoing remarks, the applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to deposit Account No. 03-0060. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

28. (Twice Amended) A sputtering target comprising tantalum metal in the shape of a sputtering target having a) an average grain size of about 50 microns or less and b) a texture in which a log ratio of (111):(100) center peak intensities of greater than about -2.0, in the substantial absence of (100) textural bands, wherein said tantalum metal has a purity of at least 99.99% tantalum.

32. (Twice Amended) The sputtering target of claim 28, wherein said metal has a purity of at least 99.995% tantalum.

114. (Twice Amended) The tantalum metal of claim 110, wherein said log ratio is from about -1.5 [11.5] to about 7.0.

120. (Amended) A tantalum sputtering component comprising an average grain size of about 150 microns or less and a uniform texture of primary (111) throughout a thickness of the component, wherein said tantalum sputtering component comprises tantalum having a purity of at least 99.99% tantalum.

123. (Amended) The tantalum sputtering component of claim 122 [120], further having 50 ppm or less O<sub>2</sub>, 25 ppm or less N<sub>2</sub>, or 25 ppm or less carbon, or combinations thereof.

125. (Amended) The tantalum sputtering component of claim 124 [120], further having 50 ppm or less O<sub>2</sub>, 25 ppm or less N<sub>2</sub>, or 25 ppm or less carbon, or combinations thereof.

150. (Amended) A tantalum sputtering component comprising a uniform texture of primary (111) throughout a thickness of the component, wherein said tantalum sputtering component comprises tantalum having a purity of at least 99.99% tantalum.

158. (Amended) A tantalum sputtering component comprising an average grain size of

about 75 microns or less and a uniform texture of mixed (111) throughout its thickness, which is substantially void of (100) textural bands, wherein said tantalum sputtering component comprises tantalum having a purity of at least 99.99% tantalum.

171. (Amended) A tantalum sputtering component comprising a mixed (111) [(111)-type] texture throughout its thickness which is substantially void of (100) textural bands, wherein said tantalum sputtering component comprises tantalum having a purity of at least 99.99% tantalum.